

Remarks

Claims 10 - 20 are pending. Favorable reconsideration is respectfully solicited.

Applicant's attorney apologizes for the misnumbering of the claims, which has been corrected. Original claim 9 has been cancelled. Withdrawal of the objections to the claims is respectfully solicited.

Claims 10, 14 - 16, and 19 have been rejected under 35 U.S.C. § 112 ¶2. Claim 10 has been rewritten to eliminate "sack-like" and to provide full antecedent basis for all terms therein. Withdrawal of the rejections set forth in paragraphs 5 and 6 of the Office Action is respectfully solicited.

Claim 19 has been rejected for use of the term "the improvement", citing lack of antecedent basis. Claim 19 is a Jepson format claim which always has a format such as "In the [subject], the improvement comprising. . . ." This is standard language whose use is approved by the MPEP. Withdrawal of the rejection of claim 19 on this basis is respectfully solicited.

Claims 10 - 20 have been rejected under 35 U.S.C. § 103(a) over Combrink U.S. 5,493,884 ("*Combrink*") in view of Scoville, Jr. U.S. 4,596,696 ("*Scoville*"). Applicant respectfully traverses this rejection.

The field of the invention is sack-like containers for packaging particulate, particularly powdery materials. In the packaging of such materials, air must be displaced from the packaging medium (sack) as the sack is being filled. Otherwise, incomplete filling will result.

Combrink and the subject invention are both directed to solving this problem. *Combrink* discloses a sack-like package with a tubular liner, a portion of which is folded over on itself to form an overlap region which is perforated over its entire inner surface (the surface

communicating with the sack interior). During filling, air entering the sack along with the material to be transported exits the perforations and flows freely from the open end of the overlap area. Thus, *Combrink* proposes an effective solution to air entrapment.

However, in order for the contents of the *Combrink* sack to be protected against the environment, particularly the ingress of moisture, *Combrink* applies a hot melt adhesive to the outer edge of his overlap zone, and when the bag is full, heat seals the "flap" so that the bag is hermetically sealed. This method has the three disadvantages that first, a hot melt adhesive must be used, thus increasing cost (including the hot melt adhesive applicator); second, heat sealing may not be useful for thermally labile contents; and third, the filling line must be retrofitted with a heat sealing device.

Applicant's invention is a non-obvious improvement over *Combrink*, which is much more cost-effective. In Applicant's sacks, the outer wall is formed of air-impermeable material with an overlap area. The inner surface of this overlap area, *i.e.* the surface 10a which abuts the inner wall 9 of air permeable material as shown in Figure 1 is perforated, preferably over its entire length, but only to the extent of 10 - 50% by area, leaving at least one perforation-free zone. The inner layer 10a and outer layer 10b of the air-impermeable outer wall are joined to each other at their edges by a seam or "joint" 14, at least one of these seams being interrupted over a continuous region which extends to 10 - 50% of the length of the joint. This interruption provides a means for gas in the sack to escape during filling: the gas flows through the air permeable inner wall, through the perforations in the inner layer 10a in the overlap region of the air-impermeable outer wall, and escapes through the interruption in the joint.

The margin 18 of the perforations is spaced from 0.5 to 10 cm from the edge of the overlap which contains the interruption through which air escapes. This non-perforated zone allows the inner surface 10a and outer surface 10b of the outside wall to bear against each other as the sack is filled, as described in ¶ [0013] of the published application, self-sealing the two layers by their abutment against each other, and thus preventing ingress of air and moisture. This self-sealing feature permits a simple construction which requires no adhesive, and therefore no

retrofitting of filling lines. Also, since no heat is applied to melt a hot melt adhesive, the contents of the sack may include heat labile substances such as thermoplastic or silicone resins with low melting points. The self-sealing feature precludes use of a hot melt adhesive, as the use thereof is not self-sealing.

There may be one interruption in the joint, *i.e.* on only one edge of the overlap region, which is preferred, or both joints may have an interruption. In the latter case, the boundary of the perforation zone is also spaced 0.5 to 10 cm, preferably 2 - 10 cm from the second joint having the interruption.

Combrink does not disclose, nor does he teach or suggest such a construction. Rather, the overlap area of *Combrink* is perforated over virtually its entire surface, and hot melt adhesive strips are applied at the edges, which must be melted and pressed together (with the facing surface) after filling the bag. Contrary to the description of *Combrink* in the Office Action, Applicant finds no drawing or discussion which limits the perforation zone to 10 - 50% of the overlap area, nor an interruption which is 10 - 50% of the length of the joint. Figures 1, 2, and 3 of *Combrink* all show an overlap area which is perforated over substantially the entire area, and the "interruption" of *Combrink* is, in all disclosed embodiments, the entire length of the overlap area. *Combrink* also does not disclose the perforation free zone width of 0.5 - 10 cm. The Office characterizes this range as "discovering an optimum value of a result effective variable", but it is respectfully submitted that this is not the case. There is no reason for *Combrink* to have a wide perforation free zone at his open edge, as this edge will be hermetically sealed by a hot melt adhesive. In Applicant's sacks, this zone must be wide enough to form a self-seal between abutting surfaces of the air-impermeable layers 10a and 10b, a requirement which does not exist in *Combrink*. Thus, this is not a result-effective variable, since the "results" are fundamentally different. *Combrink* does not disclose, nor does he teach or suggest any self-sealing mechanism, and thus there is no reason to optimize this perforation-free zone.

Scoville is not seen as either relevant or as analogous art. *Scoville* is not directed to the same field of endeavor as Applicant and *Combrink* - the filling of sacks with powdery

material while allowing expulsion of air, nor is *Scoville* directed to any problem solved by Applicant. *Scoville* is thus non-analogous art which cannot be used for any purpose in formatting a rejection. See, e.g. *In re Clay*, 23 USPQ 2d 1058 (Fed. Cir. 1992) and cases cited therein. The mere fact that the subject invention and *Scoville* are both directed to packages (sacks v. boxes) is not enough to make them analogous art, as discussed in *Clay*.

Scoville is directed to a package which is used for testing high temperature vacuum assisted sterilization, as is used in hospitals. To test the effectiveness of sterilization, past practice prior to *Scoville* was to manually prepare a test pack containing paper, towels, or the like, with a thermally sensitive indicator sheet in the middle of the package. After evacuating the autoclave and then introducing hot air or steam to sterilize the contents of the autoclave, the test pack is removed and disassembled, and the indicator sheet is visually assessed. If all the thermal indicator has changed color, the sterilization is viewed effective. The test pack is then discarded. There are no powdery ingredients, no sack, and no filling of the sack.

In order to function, the hot air and/or steam which is subsequently introduced into the autoclave after high vacuum is established must be able to penetrate the *Scoville* test pack, preferably to the same extent as the articles being sterilized. Thus, the ingress of hot air or steam must be capable of being moderated to take into account different substrates and different autoclaving conditions. The test pack must also be robust so that it does not disintegrate, for example after being steam-treated.

To achieve these results, *Scoville* creates a box having end flaps 4 and 9 which are folded to seal the box, and the material of construction is an outer layer of air-permeable material (just the opposite of the present invention), e.g. cardboard, and an inner layer of air-impermeable material which, however, is perforated to allow ingress of hot air or steam. The perforations are not in an overlap area of an air-impermeable material, but as shown in his figures and discussed in the specification, scattered over the entire outer surface of the box.

If a box of *Scoville* (which is not a sack) were used for the entirely different

purpose of filling with powdery materials, the material would escape through the perforations, since these perforations are through both the inside film and outside (paper) layers. Moreover, once the box of *Scoville* is "sealed" (by inserting the end flaps of the box), there is nothing to prevent ingress of air or moisture, since the perforations remain open to the surroundings. *Scoville* does not care whether air or moisture penetrates into his container, as the thermal indicator is not sensitive to air or moisture, only to high temperature.

The Office states that *Scoville* teaches "a similar packaging medium", but this is incorrect. *Scoville* teaches a box, not a sack. The Office also indicates that *Scoville* teaches an outer layer of impermeable material, but that is also incorrect. As *Scoville* states at column 4, line 22, "The film will be on the inside of the box." This is the only embodiment taught by *Scoville*.

One skilled in the art of packaging particulate materials would not look to *Scoville* for any purpose.

The Office states on page 4 of the Office Action that *Combrink* teaches an "interruption" in the upper half of the packaging medium 22'. This is incorrect. In Figure 3, the interruption is along virtually the entire height of the sack, between lines 26. It is in both the upper and lower portions of the sack. Applicant's interruption is maximally about 50% of the length of the joint.¹ The perforations and overlap area of *Combrink* extend beyond the interrupted area, into the top and bottom of the sack (21', 21'), but are heat sealed at these points by hot melt adhesive before filling. There is no disclosure of an interruption only over the upper half. Applicant prefers such an embodiment since their sack is self-sealing, and it is thus desirable for the open area to be near the top so that filled material will not block a lower positioned opening. *Combrink* can have the entire length of the bag open since he will later heat seal with hot melt adhesive.

¹*Combrink* has no joint.

For all the reasons given above, withdrawal of the rejection of the claims over *Combrink* is solicited. It is noted that *Combrink* was cited against the corresponding European application. The claims of the European application, as amended, have been found patentable over *Combrink*. These claims are believed to be substantially identical to the presently amended claims in scope. The European claims are somewhat more concise due to the inclusion of drawing numerals which is not ordinarily done in U.S. claim practice, and due to differing antecedent basis requirements. However, with these differences in mind, the claim scope is believed to be the same. Applicant understands that a finding of patentability in foreign jurisdictions is not controlling in the U.S., but can be persuasive, particularly if over the same prior art, and also where, as is true in the EPO, the requirements of novelty and obviousness (lack of invention) are very similar to these same concepts in the U.S.

Applicant submits that the claims are now in condition for Allowance, and respectfully request a Notice to that effect. If the Examiner believes that further discussion will advance the prosecution of the Application, the Examiner is highly encouraged to telephone Applicant's attorney at the number given below.

Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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